



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

RBA9829-A-PO
Job Sheet 182580



Part No: RBA9829-A-PO

Job Qty: 1 ea

Part Name: Main Rotor Mast Nut Wench (RB Design)



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 8/28/18

Job Tracking No:

Due Date: 10/22/18

Created By: Patrick Lussier

Type: Stock

Description:

Note: DWG RBA9829-A Rev. 4 IPP Rev. A 18.08.28 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	1 pcs		10/22/18	0.00	0.00	Purchasing		OCT 23 2018
110	Packaging	1 pcs		10/22/18	0.00	0.00	Packaging2		OCT 23 2018
120	QC	1 pcs		10/22/18	0.00	0.00	QC6		38
140	QC	1 pcs		10/22/18	0.00	0.00	QC5 1014		9-89
150	Packaging	1 pcs		10/22/18	0.00	0.00	Packaging3		21
160	QC21-FG	1 Ea		10/22/18	0.00	0.00	QC21		OCT 26 2018

Part Op 100 - Issue PO to ARROW TECH MACHINE WORKS P/O: 040860 MANUFACTURE RBA9829-A AS PER DWG -
Descriptions: Certificate of conformity is required

aug 27. 2018 x1 R L

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
RBA9829-AP	Main Rotor Mast Nut Wrench (RB Design)	1 Ea (1 ea)	100-Purchasing	S120451

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	RBA9829-AP	1	0	0

Part Specifications

Specifications could not be found.

Plex 8/28/18 1:06 PM dart.Lussier.Patrick



Container No: S120452



Part: RBA9829-A

Job No: 182580

Serial No/Batch: S120452

Revision: 4

Inspector:

Exp Date:

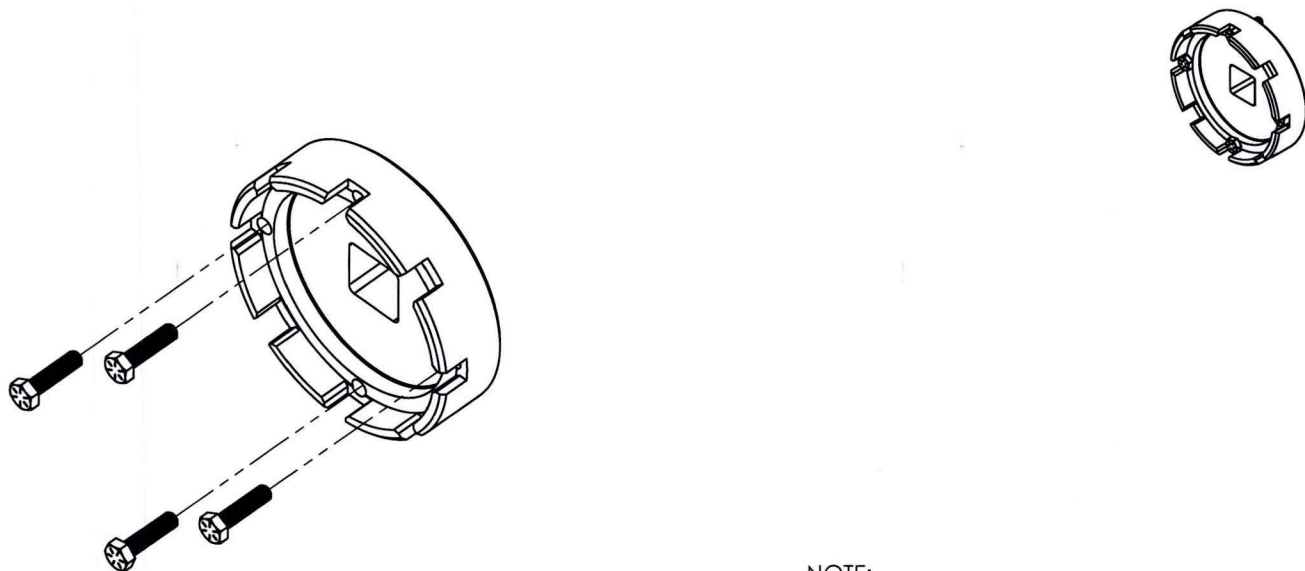
Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 10/23/18

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1		INSIDE DIA. INCREASED FROM $\varnothing 2.575$ TO $\varnothing 2.625$ DEPTH INCREASED FROM .540 TO .590. CORNER RADIUS LIMIT OF .015, THICKNESS AT MAX O.D. INCREASED FROM .712 TO .912. BOLD CHANGED FROM AN3-5A TO AN3-6A	3/16/05	-	-
2		CHANGED -3 BOLT FROM AN3-6A TO AN3-4A, AND DELETED -5 WASHERS AN960-10L.	9/27/06	-	-
3		CHANGED -3 BOLT FROM AN3-4A TO AN3-6A. ALSO ADDED NEW DWG FORMAT.	7/3/08	WP	DW
4	16-0080	UPDATED TO NEW STANDARD. -1 CH'D MAT'L WAS 41L40 IS 4140/4142. ADDED 3/4 DRIVE DIMS. CH'D DIM WAS R.125 IS R.13. CH'D DIM WAS .10 CHAMFER IS .10 X 45°. CH'D DIM WAS .045 CHAMFER EACH INSIDE CORNER IS 16X .045 X 45°. REMOVED NOTE DRILL 13/16 PILOT FOR 3/4 BROACH. ADDED SPEC QMSI-6.2.2 REV D.	7/21/2016	DEW	SM



NOTE:

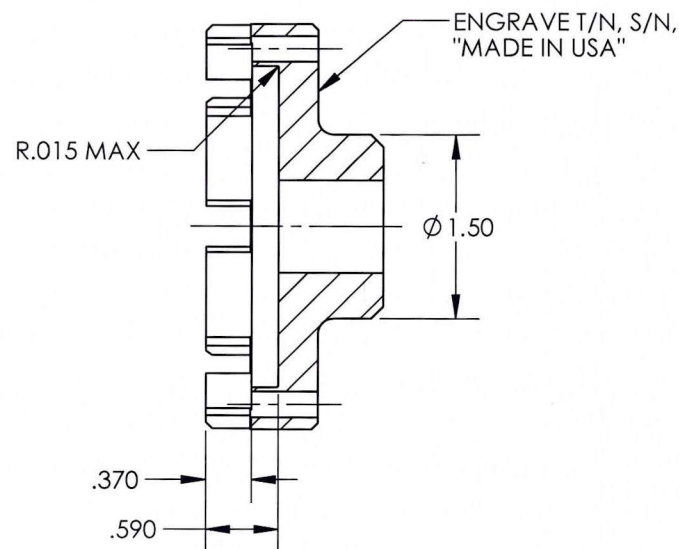
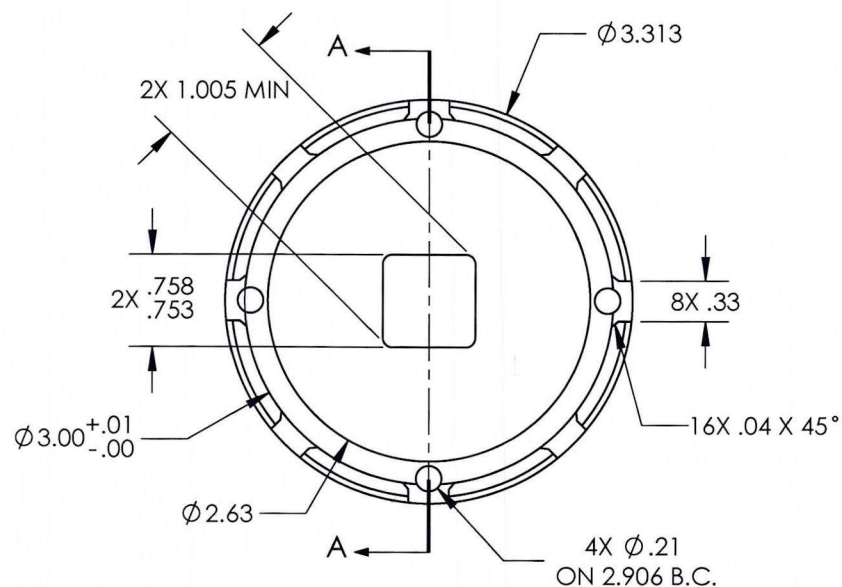
BOLTS DO NOT PROTRUDE THRU NUT WHEN INSTALLED.

DART AEROSPACE	
TITLE ROTOR MAST NUT WRENCH	
DWG NO. RBA9829-A	REV 4
MAT'L HEAT TREAT FINISH SPEC	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125/✓
DRAWN BY: COLE	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: MACKOVJAK	MD 500
SCALE 1:2	DATE 10/10/2000
SHEET 1 OF 2	

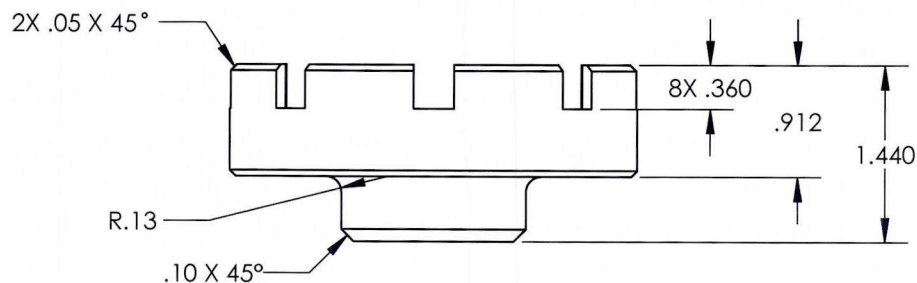
ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
			-1	1	WRENCH	4140/4142		2
		B/O	-3	4	BOLT	STEEL	AN3-6A	1

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1		INSIDE DIA. INCREASED FROM $\varnothing 2.575$ TO $\varnothing 2.625$ DEPTH INCREASED FROM .540 TO .590. CORNER RADIUS LIMIT OF .015, THICKNESS AT MAX O.D. INCREASED FROM .712 TO .912. BOLD CHANGED FROM AN3-5A TO AN3-6A	3/16/05	-	-
2		CHANGED -3 BOLT FROM AN3-6A TO AN3-4A, AND DELETED -5 WASHERS AN960-10L..	9/27/06	-	-
3		CHANGED -3 BOLT FROM AN3-4A TO AN3-6A. ALSO ADDED NEW DWG FORMAT.	7/3/08	WP	DW
4	16-0080	ADDED 3/4 IN. DRIVE DIMS. CH'D DIM WAS R.125 IS R.13, CH'D DIM WAS .10 X 45°, CH'D DIM WAS .045 CHAMFER EACH INSIDE CORNER IS 16X .045 X 45°. REMOVED NOTE DRILL 13/16 PILOT FOR 3/4 IN. BROACH. ADDED SPEC QMSI-6.2.2 REV D. CH'D MATL WAS 41L40 IS 4140/4142.	7/18/2016	DEW	SM



SECTION A-A



(-1)
WRENCH

DART AEROSPACE	
TITLE ROTOR MAST NUT WRENCH	
DWG NO. RBA9829-A-1	REV 4
MAT'L 4140/4142 HEAT RC 35-40 FINISH BLACK OXIDE SPEC QMSI-6.2.2 REV D DRAWN BY: COLE CHECKED: CLOUGH OPPTS APPR: ANDERSON QA APPR: LINDSAY APPROVED: MACKOVJAK	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± .5° .X ± .1 SURFACES = 12.5/✓ 1. BREAK ALL SHARP EDGES .015 X 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
USED ON MODEL MD 500	
SCALE 2:3	DATE 10/10/2000
SHEET 2 OF 2	



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO040860**

Supplier: ARR002-VU
Arrow Tech Machine Works
29751 E. Enid Road,
Unit C
Eugene, OR 97402 USA
Phone: 541-780-6938
Fax: 458-215-4938

PO No: PO040860

PO Date: 8/27/18

Due Date: 10/22/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Phone:

Revision

Ship To:

Pymt Terms: Net 30

Freight Terms:

Special Comments:

Items													
Line Item	Job	Part	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	182576	RBEB670-P0001-101P			Positioning Guage	Firmed	-	10/22/18	1 Ea	0 Ea	1 Ea	\$1,255.90/Ea	\$1,255.90
						1 X	OCT 22 2018						
2	182578	RBT18632p			landing gear brng install/rmvl tool	Firmed	-	10/22/18	1 pcs	0 pcs	1 pcs	\$713.21/pcs	\$713.21
						1 X	OCT 22 2018						
3	182579	RBH9807p			Main Transmission Drain Tool	Firmed	-	10/3/18	1 pcs	0 pcs	1 pcs	\$495.42/pcs	\$495.42
						1 X	OCT 03 2018						
4	182580	RBA9829-AP			Main Rotor Mast Nut Wrench (RB Design)	Firmed	-	10/22/18	1 Ea	0 Ea	1 Ea	\$613.00/Ea	\$613.00
						1 X	OCT 22 2018						
5	182581	RBH9807p			Main Transmission Drain Tool	Firmed	-	10/22/18	1 pcs	0 pcs	1 pcs	\$495.42/pcs	\$495.42
						1 X	OCT 22 2018						
6	182583	RBE1X36-176-779-2P			Driver	Firmed	-	10/22/18	1 Ea	0 Ea	1 Ea	\$1,363.09/Ea	\$1,363.09
						1 X	OCT 22 2018						
7	182584	RBT18526P			Main Rotor Blade Bolt Extractor	Firmed	-	10/22/18	1 Ea	0 Ea	1 Ea	\$813.00/Ea	\$813.00
						1 X	OCT 22 2018						
Grand Total:												\$5,749.04	

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Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO040860

Order Notes

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE)

A012 CHEMICAL AND PHYSICAL TEST REPORTS

A016 PERSONNEL QUALIFICATION

A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENT

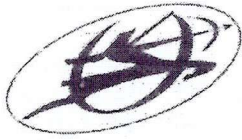
A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

A handwritten signature in black ink, appearing to be "RL" or similar, located to the right of the terms and conditions text.

Plex 10/3/18 1:18 PM dart.Lussier.Patrick



**PHGE Machineworks dba
Arrowtech Machineworks**
29751 E Enid Rd. Unit C
Eugene, Oregon 97402
Phone: (541) 780-6938
Fax: (458) 215-4938

Packing Slip

NO. 290

Date: 10/19/2018
PO Ref: 040860 & 040903
Ship via: Fedex Priority

Bill To:
Dart Aerospace
1270 Aberdeen St. Hawkesbury, ON
CANADA K6A 1K7

Ship To:
Dart Aerospace
1271 Aberdeen St. Hawkesbury, ON
CANADA K6A 1K8

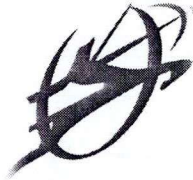
Qty	Item	Part No.
1 ✓	POSITIONING GUAGE ✓	✓ RBEB670-P0001-101 ✓
1 ✓	LANDING GEAR BEARING TOOL ✓	✓ RBT18632 REV 4 ✓
1 ✓	MAIN ROTOR MAST NUT WRENCH ✓	✓ RBA9829-A REV 4 ✓
1 ✓	MAIN TRANSMISSION DRAIN TOOL ✓	✓ RBH9807 REV 1A ✓
1 ✓	SOCKET WRENCH ✓	✓ RBE1X36-176-779 REV 2 ✓
1 ✓	M/R BLADE BOLT EXTRACTOR ✓	✓ RBT18526 REV 1 ✓
1 ✓	SEAL REMOVE & INSTALL KIT ✓	✓ HT-400-SK REV 1B ✓

Received by: _____

Packaged by: ANP

Checked by: Q.S.

Thank You



ARROW TECH MACHINE WORKS

Certificate of Conformance

Your Purchase Order No:040860

Dated: 10/19/2018

Our Order / Job No: 040860-4AWT

Order Qty:1

Part Name: MAIN ROTOR MAST NUT WRENCH

Part Number:RBA9829-A

Lot Size:N/A

Ship Date: 10/19/2018

We certify that these parts shipped to you are of domestic or international manufacture and conform to all requirements of the Purchase Order. These parts have been manufactured and inspected in accordance with all required specifications, instructions and drawings. Any applicable specifications are listed below:

Drawing Number: RBA9829-A

Rev:4

Material Size and Type: -1/4140 STEEL

Material Specifications: STEEL: ASTM A108, ASTM A29

Heat Treatment: 36.4 HRC

Plating/Finish: N/A

Mercury Contamination: The material used to process this order has not come in contact with mercury or mercury bearing instruments.

Date: 10/19/18

Signed: Hemant Patel

DAS
38
9-89

PHGE Machine Works LLC dba Arrow Tech Machine Works
29751 E. Enid Rd. Unit C Eugene, Oregon 97402
Main: (541) 780-6938 | Fax: (458) 215-4938
www.atechmachineworks.com